Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A keep-warm system to provide freeze protection for a fuel cell power plant **(10)**, comprising:

a. a fuel cell stack assembly (CSA) **(12)** including an anode **(16)**, a cathode **(18)**, an electrolyte **(14)**, and a cooler **(20)**;

b. fuel supply means **(25)** for providing a supply of fuel, at least some of the fuel being supplied as reactant to the anode **(16)**;

c. a source of oxidant reactant **(22)** operatively supplied to the cathode **(18)**;

d. a water management system **(30, 28)** operatively connected to the cooler **(20)** of the CSA **(12)**;

e. thermal insulating means **(64)** enclosing at least one of the CSA **(12)** and the water management system **(30, 28)** for providing thermal insulation thereof; and

f. catalytic fuel burner means **(66)** operatively connected to the fuel supply means **(25)** and to the source of oxidant reactant **(22)** for catalytically reacting the fuel and oxidant and providing a source of heat, the burner means **(66)** being disposed and operative to supply heated gas into the thermal insulating enclosure means **(64)**, and to the at least one of the CSA **(12)** and the water management system **(30, 28)** in the thermal insulating enclosure

means **(64)**, thereby to prevent freezing of water in freeze-sensitive parts of the fuel cell power plant.

Claim **2** (original): The keep-warm system of claim **1** wherein the catalytic burner means **(66)** includes a catalytic surface **(72)** for combustively reacting the fuel in the presence of oxidant in a flameless manner to release heat only in a thermal range less than about 1000^0 F.

Claim **3.** (original): The keep-warm system of claim **2** wherein the heat released by catalytic combustion at the catalytic burner means **(66)** is in the thermal range of about 200^0-700^0 F.

Claim **4.** (original): The keep-warm system of claim **2** wherein the source of oxidant reactant **(22)** is ambient air, the air being supplied to the catalytic burner means **(66)** and mixed with fuel from the fuel supply means **(25)** for combustively reacting the mixture in the presence of the catalytic surface **(72)** to release heat.

Claim **5.** (original): The keep-warm system of claim **1** wherein the fuel supply means **(25)** comprises a container of hydrogen stored under pressure.

Claim **6.** (original): The keep-warm system of claim **1** wherein both the CSA **(12)** and the water management system **(28, 30)** are substantially enclosed by the thermal insulating means **(64)**.

Claim **7.** (original): The keep-warm system of claim **4** wherein the electrolyte **(14)** of the CSA **(12)** is a proton exchange membrane (PEM), the fuel from the fuel

supply means **(25)** is hydrogen, and the heat released by catalytic combustion at the catalytic burner means **(66)** is in the thermal range of about 200^0 - 700^0 F.

Claim **8**. (currently amended): In a fuel cell power plant **(10)** having a fuel cell stack assembly (CSA) **(12)** including an anode **(16)**, a cathode **(18)**, and an electrolyte **(14)**, ~~and a cooler **(20)**,~~ a fuel supply **(25)** for providing fuel to at least the anode **(16)**, a source of oxidant reactant **(22)** for supplying at least the cathode **(18)**, and a water management system **(30, 28)** operatively connected to the ~~cooler **(20)** of the~~ CSA **(12)**, the method of preventing freezing of water in freeze-sensitive parts of the fuel cell power plant **(10)** during shutdown, comprising the steps of:

g. selectively flowing **(62, 63, 69, 67)** fuel **(25)** and oxidant **(22)** to a catalytic fuel burner **(66)** during shutdown for catalytic combustion to provide heated gas;

h. convectively flowing the heated gas into heat transfer relation with the freeze-sensitive parts of the fuel cell power plant **(10)** to provide heat thereto; and

i. thermally insulating the freeze-sensitive parts of the fuel cell power plant **(10)** including the heated gas flowing in heat transfer relation therewith.

Claim **9**. (new): The method of claim **8** wherein the step of selectively flowing fuel and oxidant to a catalytic fuel burner provides heated gas in a thermal range of about 200^0 - 700^0 F.

Claim **10**. (new): The method of claim **8** wherein the step of thermally insulating the freeze-sensitive parts of

the fuel cell power plant (10) comprises thermally insulating both the CSA (12) and the water management system (28, 30).

Claim **11**. (new): A keep-warm system to provide freeze protection for a fuel cell power plant **(10)**, comprising:

j. a fuel cell stack assembly (CSA) **(12)** including an anode **(16)**, a cathode **(18)**, and an electrolyte **(14)**;

k. fuel supply means **(25)** for providing a supply of fuel, at least some of the fuel being supplied as reactant to the anode **(16)**;

l. a source of oxidant reactant **(22)** operatively supplied to the cathode **(18)**;

m. a water management system **(30, 28)** operatively connected to the CSA **(12)**;

n. thermal insulating means **(64)** enclosing at least one of the CSA **(12)** and the water management system **(30, 28)** for providing thermal insulation thereof; and

o. catalytic fuel burner means **(66)** operatively connected to the fuel supply means **(25)** and to the source of oxidant reactant **(22)** for catalytically reacting the fuel and oxidant and providing a source of heat, the burner means **(66)** being disposed and operative to supply heated gas into the thermal insulating enclosure means **(64)**, and to the at least one of the CSA **(12)** and the water management system **(30, 28)** in the thermal insulating enclosure means **(64)**, thereby to prevent freezing of water in freeze-sensitive parts of the fuel cell power plant.

Claim **12**. (new): The keep-warm system of claim **11** wherein the catalytic burner means **(66)** includes a catalytic surface **(72)** for combustively reacting the fuel in the presence of oxidant in a flameless manner to release heat only in a thermal range less than about 1000^0 F.

Claim **13**. (new): The keep-warm system of claim **12** wherein the catalytic burner means **(66)** is separate from the CSA **(12)**.

Claim **14**. (new): The keep-warm system of claim **13** wherein the CSA **(12)** includes a cooler **(20)** and the water management system **(30, 28)** is operatively connected to the cooler **(20)** of the CSA **(12)**.

Claim **15**. (new): The keep-warm system of claim **12** wherein the heat released by catalytic combustion at the catalytic burner means **(66)** is in the thermal range of about 200^0-700^0 F.

Claim **16**. (new): The keep-warm system of claim **12** wherein the source of oxidant reactant **(22)** is ambient air, the air being supplied to the catalytic burner means **(66)** and mixed with fuel from the fuel supply means **(25)** for combustively reacting the mixture in the presence of the catalytic surface **(72)** to release heat.

Claim **17**. (new): The keep-warm system of claim **11** wherein the fuel supply means **(25)** comprises a container of hydrogen stored under pressure.

Claim **18**. (new): The keep-warm system of claim **11** wherein both the CSA **(12)** and the water management

system **(28, 30)** are substantially enclosed by the thermal insulating means **(64)**.

Claim **19**. (new): The keep-warm system of claim **11** wherein, for a system scaled commensurately with a consumption by catalytic fuel burner means **(66)** of not more than about 0.014 pph of hydrogen for about a 75 kw PEM fuel cell stack assembly, the insulation value of the thermal insulating means **(64)**, as determined by at least the "R" value and thickness of said thermal insulating means, is sufficient to prevent freezing of water in freeze-sensitive parts of the plant for at least several days at external temperatures as low as -40^0 C.

Claim **20**. (new): The keep-warm system of claim **19** wherein the electrolyte (**14**) of the CSA **(12)** is a proton exchange membrane (PEM), the fuel from the fuel supply means **(25)** is hydrogen, and the heat released by catalytic combustion at the catalytic burner means **(66)** is in the thermal range of about 200^0 - 700^0 F.